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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/530,983	05/08/2000	GUSTAVO DECO	P000861	5072
21171	7590	01/27/2004	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			OROPEZA, FRANCES P	
			ART UNIT	PAPER NUMBER
			3762	28

DATE MAILED: 01/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/530,983

Applicant(s)

DECO ET AL.

Examiner

Frances P. Oropeza

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 1/2/04 (Response and RCE).
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Request for Continued Examination***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. The Applicant's submission filed on 1/2/04 has been entered.

***Claim Rejections - 35 USC § 103***

2. Claims 1-3, 10, and 16-18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ravdin et al. (US 5862304) in view of Smyth (US 5465321).

Ravdin et al. disclose a method for predicting the future occurrence of non-existent medical conditions, including medical conditions such as psychiatric problems (col. 3 @ 19-27). Data is evaluated to predict the future occurrence of the medical condition that has not yet occurred using a neural network to analyze the data (Abstract). Once the neural network is trained, test data is used to predict the future occurrence of the disease or medical condition (col. 2 @ 43-50). The prediction of the medical condition enables selection of appropriate therapy (col. 1 @ 15-28). The data processing utilizes a neural network to predict the future occurrence of non-existent medical conditions. The data processing by the neural network entails successive data iterations, read to be using a continuous information flow, to make successful predictions of patient relapse (col. 9 @ 49-52).

As discussed in the previous paragraph of this action, Ravdin et al. disclose the claimed invention except for the information flow describing a development of a predictability of plural future system states.

Smyth teaches future state prediction using evaluation of a temporal, hierarchical pattern of information flow for the purpose of predicting future outcomes, hence enabling robust decision making. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used a temporal, hierarchical pattern of information flow for the purpose of predicting future outcomes in the Ravdin et al. system in order to continuously utilize the monitored data to increase the speed and accuracy of predicted future states (abstract; col. 2 @ 37-53; col. 5 @ 46 – col. 6 @ 8; col. 6 @ 25-34; col. 8 @ 15-29; col. 22 @ 29-37).

The Applicant's arguments filed 1/2/04 have been fully considered, but they are not convincing.

The Applicant appears to assert the Examiner has not considered and not given the claimed features associated with "information flow" the broadest reasonable interpretation. The Examiner disagrees. The features of information flow have been interpreted in light of the specification, and in light of their plain meaning as understood by one of ordinary skill in the art. The Examiner agrees with the Applicant that the filing of an IDS does not by itself mandate information of the same into the claims of specification. The two articles included in the IDS authored by one of the inventors of the instant invention, Gustavo Deco, have been considered as indicated by the signed P.T.O. 1449.

The Applicant appears to assert the Examiner does not recognize the Applicants right to define a claim term. The Examiner disagrees. The Applicant's right be his own lexicographer and to define a claim term is understood.

The Applicant asserts the underlying rejections are based on an incorrect interpretation/ definition of "information flow". The Examiner disagrees. The Applicant states "the claimed information flow is at least a characterization of a dynamic behavior (including statistical dependencies between past and future points in time) of a complex system" and Smyth does not disclose such claimed information flow. The Examiner disagrees. Smyth teaches continuous monitoring of complex dynamic systems where future states are predicted using evaluation of the temporal, hierarchical patterns of information flow. The patterns associated with the data flow are estimated in intervals of time and the patterns statistically evaluated based on past and future points to estimate probabilities of future events (abstract; col. 2 @ 37-57; col. 3 @ 30-45; col. 8 @ 14-29), hence Smyth teaches information flow as characterization of a dynamic behavior (including statistical dependencies between past and future points in time) of a complex system.

3. Claims 4-9 and 11-15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ravdin et al. (US 5862304) in view of Smyth (US 5465321) and further in view of Abrams et al. (US 6117066). As discussed in paragraph 2 of this action, modified Ravdin et al. discloses the claimed invention except for the nature of the implemented action being excitation of the system with a chaotic signal, a noise signal or a regular signal supplied by an electric or magnetic field via an electrode.

Abrams et al. disclose a treatment for certain neurological and psychiatric disorders discussing the historical use of pulsed electrical current (col. 1 @ 38 – col. 3 @ 4) and an alternate approach using electrodes (10-13) to provide pulsed magnetic fields with varying intensity (col. 4 @ 61 – col. 5 @ 19). The signals provided would be classified as a chaotic signal, a noise signal or a regular signal depending on the intensity and impact of the signal. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method for predicting the future occurrence of non-existent medical conditions as taught by modified Ravdin et al., with the nature of the implemented action being excitation of the system with a chaotic signal, a noise signal or a regular signal supplied by an electric or magnetic field via an electrode as taught by Abrams et al. to provide proven means to effectively treat neurological and psychiatric disorders (abstract; col. 1 @ 13-17).

#### ***Statutory Basis***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Fran Oropeza whose telephone number is (703) 605-4355. The Examiner can normally be reached on Monday – Thursday from 6 a.m. to 4:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Angela D. Sykes can be reached on (703) 308-5181. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communication and (703) 306-4520 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

Frances P. Oropeza  
Patent Examiner  
Art Unit 3762

FPO  
1/23/04

Angela D. Sykes

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